





OPTIONAL 32K RAM

NOTE - FOR COMPONENT VALUES SEE APPENDIX C

SINCLAIR ZX SPECTRUM
 CIRCUIT DIAGRAM
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APPENDIX C — SPECTRUM PARTS LIST

Resistors

R1 470R
 R2 470R
 R3 470R
 R4 470R
 R5 470R
 R6 570R
 R7 470R
 R8 470R
 R9 8K2
 R10 8K2
 R11 8K2
 R12 8K2
 R13 8K2
 R14 8K2
 R15 8K2
 R16 8K2
 R17 330R
 R18 330R
 R19 330R
 R20 330R
 R21 330R
 R22 330R
 R23 330R
 R24 3K3 (or 1K)
 R25 180R
 R26 680R
 R27 680R
 R28 10K
 R29 1K5
 R30 1K
 R31 220K
 R32 100R
 R33 680R
 R34 15R
 R35 10K
 R36 680R
 R37 1K
 R38 3K3
 R39 3K3
 R40 1K
 R41 1K5
 R42 1K
 R43 3K
 R44 5K1
 R45 1K
 R46 1K

R47 220R
 R48 4K7 (or 2K2)
 R49 18K (or 8K2)
 R50 4K7
 R51 2K2
 R52 2K2
 R53 390R
 R54 100K
 R55 56R
 R56 220R
 R57 330R
 R58 1K
 R59 1K8
 R60 100R
 R61 15R
 R62 15R
 R63 220R
 R64 15R
 R65 10K
 R66 10K
 R67 10K
 R68 10K
 R69 10K
 R70 220R
 R71 220R
 R72 10K

Capacitors

C1 47nF
 C2 47nF
 C3 47nF
 C4 47nF
 C5 47nF
 C6 47nF
 C7 47nF
 C8 47nF
 C9 — C24 Decoupling Capacitors
 C25 22uF 16v
 C26 47 nF
 C27 1uF 63v
 C28 22uF 16v
 C29 47nF
 C30 47nF
 C31 100nF
 C32 100nF
 C33 47nF
 C34 22uF 16v
 C35 10nF

C36 47nF
 C37 33pF
 C38 33pF
 C39 10nF
 C40 47nF
 C41 47nF
 C42 47nF
 C43 100nF
 C44 100uF 16v
 C45 100uF 16v
 C46 1uF 50v
 C47 22uF 16v
 C48 47nF
 C49 47nF
 C50 22uF 16v
 C51 NOT USED
 C52 100pF
 C53 100pF
 C54 470pF
 C55 — C62 Decoupling Capacitors
 C63 47pF
 C64 100pF
 C65 22uF 16v
 C66 47nF

Transistors

TR1 ZTX 313
 TR2 ZTX 313
 TR3 ZTX 313
 TR4 ZTX 651
 TR5 ZTX 213

Miscellaneous

7805 1 amp 5 volt regulator
 X1 14 MHz crystal
 X2 4.4336 MHz colour crystal
 VR1 2K2 horizontal preset
 VR2 2K2 horizontal preset

Diodes

D1 — D14 IN4148
 D15 high power silicon diode
 D16 Zener diode

Integrated circuits

IC1 Sinclair ULA
 IC2 Z80A CPU
 IC3 74LS157
 IC4 74LS157
 IC5 16K ROM

IC6 — IC13 16K×1 4116 Dynamic RAMS
 IC14 LM1889N
 IC15 — IC22 32K×1 4532 Dynamic RAMS
 IC23 74LS32N
 IC24 74LS00N
 IC25 74LS157N
 IC26 74LS157N